

FIG. 1

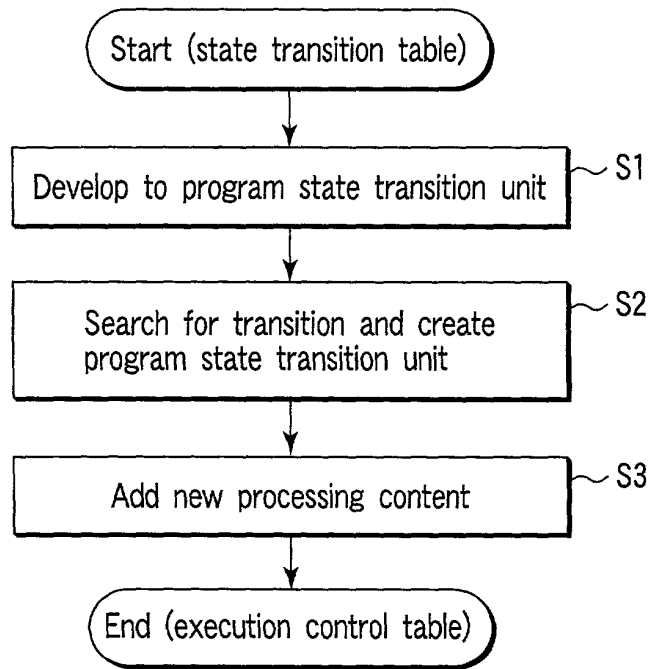


FIG. 2

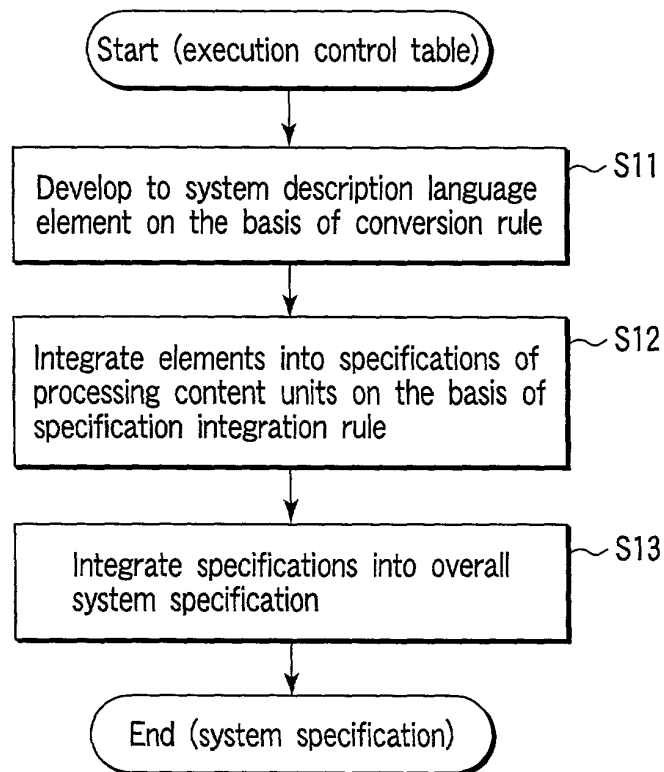


FIG. 3

Number	Current state	Event	Condition	Next state	Execution control			
					start	stop	interrupt	resume finish
[ 0 ]	start			stopped	START			
[ 1 ]	stopped	<play>		playing	play			
[ 2 ]	playing	<pause>		pausing	pause		play	
[ 3 ]	playing	[FINISH]		stopped				play
[ 4 ]	pausing	<play>		playing	pause			play
[ 5 ]	pausing	<pause>		playing	pause			play
[ 6 ]	playing	<stop>		stopped	play			
[ 7 ]	pausing	<stop>		stopped	pause			

FIG. 4

Number	Current program	Transition	Start type	End type	Next program
	play	[ 2 ]	START	Interrupt pause	pause
	pause	[ 4 ]	resume	Interrupt end	play
	pause	[ 5 ]	resume	Interrupt end	play
	START	[ 0 ]		Interrupt end	
		[ 1 ]	START		play
	play	[ 3 ]		Complete	
	play	[ 6 ]		Interrupt end	
	pause	[ 7 ]		Interrupt end	

FIG. 5

Number	Current program	Transition	Start type	End type	Next program
	pause	[ 7 ]→[ 1 ]	START	Interrupt end	play
	play	[ 6 ]→[ 1 ]	START	Interrupt end	play
	play	[ 3 ]→[ 1 ]	START	Interrupt end	play
	START	[ 0 ]→[ 1 ]	START	Complete	play

FIG. 6

Number	Current state	Event	Condition	Next state	Execution control			
					start	stop	interrupt	resume finish
[ 0 ]	start			stopped	Xstop			
[ 1 ]	stopped	<play>		playing	play	Xstop		
[ 2 ]	playing	<pause>		pausing	pause		play	
[ 3 ]	playing	[FINISH]		stopped	Xstop			play
[ 4 ]	pausing	<play>		playing		pause		play
[ 5 ]	pausing	<pause>		playing		pause		play
[ 6 ]	playing	<stop>		stopped	Xstop	play		
[ 7 ]	pausing	<stop>		stopped	Xstop	pause		

FIG. 7

Number	Current program	Transition	Start type	End type	Next program
(0)	START	[0]	START		Xstop
(1)	Xstop	[1]	START	Interrupt end	play
(2)	play	[2]	START	Interrupt pause	pause
(3)	play	[3]	resume	Complete	Xstop
(4)	pause	[4]	resume	Interrupt end	play
(5)	pause	[5]	resume	Interrupt end	play
(6)	play	[6]	START	Interrupt end	Xstop
(7)	pause	[7]	START	Interrupt end	Xstop

FIG. 8

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Number	Current program	Transition	Start type	End type	Next program	Conversion result
(0)	START	[0]	START		Xstop	fsm{wait(start), Xstop, goto(1)}
(1)	Xstop	[1]	START	Interrupt end	play	fsm{wait(ev_Xstop), play, goto(1)}
(2)	play	[2]	START	Interrupt pause	pause	try{Xstop}trap(ev_[1]){notify(ev_Xstop_stop)} fsm{wait(ev_play_interrupt), pause, goto(1)} try{play}itrap(ev_[2]){fsm{notify(ev_play_interrupt), wait(ev_play_resume)}}
(3)	play	[3]	START	Complete	Xstop	fsm{wait(ev_play_end), Xstop, goto(1)} fsm{play, notify(ev_play_end), goto(1)}
(4)	pause	[4]	resume	Interrupt end	play	fsm{wait(ev_pause_stop_resume), notify(ev_play_resume), goto(1)} try{pause}trap(ev_[4]){notify(ev_pause_stop_resume)}
(5)	pause	[5]	resume	Interrupt end	play	fsm{wait(ev_pause_stop), notify(ev_play_resume), goto(1)} try{pause}trap(ev_[5]){notify(ev_pause_stop)}
(6)	play	[6]	START	Interrupt end	Xstop	fsm{wait(ev_play_stop), Xstop, goto(1)} try{play}trap(ev_[6]){notify(ev_play_stop)}
(7)	pause	[7]	START	Interrupt end	Xstop	fsm{wait(ev_pause_stop), Xstop, goto(1)} try{pause}trap(ev_[7]){notify(ev_pause_stop)}

FIG. 9

```
par{
  fsm(wait(start, ev_play_end, ev_play_stop, ev_pause_stop),
    try{Xstop}trap(ev_[1]){notify(ev_Xstop_stop)},
    goto(1)
  },
  fsm(wait(ev_Xstop_stop),
    try{fsm{play, notify(FINISH)}}
    itrp(ev_[2]){fsm{notify(ev_play_interrupt), wait(ev_play_resume)}}
    trap(ev_[6]){notify(ev_play_stop)}
    trap(FINISH){notify(ev_play_end)},
    goto(1)
  },
  fsm(wait(ev_play_interrupt),
    try{pause}trap(ev_[5]){notify(ev_pause_stop_resume)}
    trap(ev_[7]){notify(ev_pause_stop)}
    trap(ev_[4]){notify(ev_pause_stop_resume)},
    goto(1)
  },
  fsm(wait(ev_pause_stop_resume), notify(ev_play_resume), goto(1))
}
```

FIG. 10



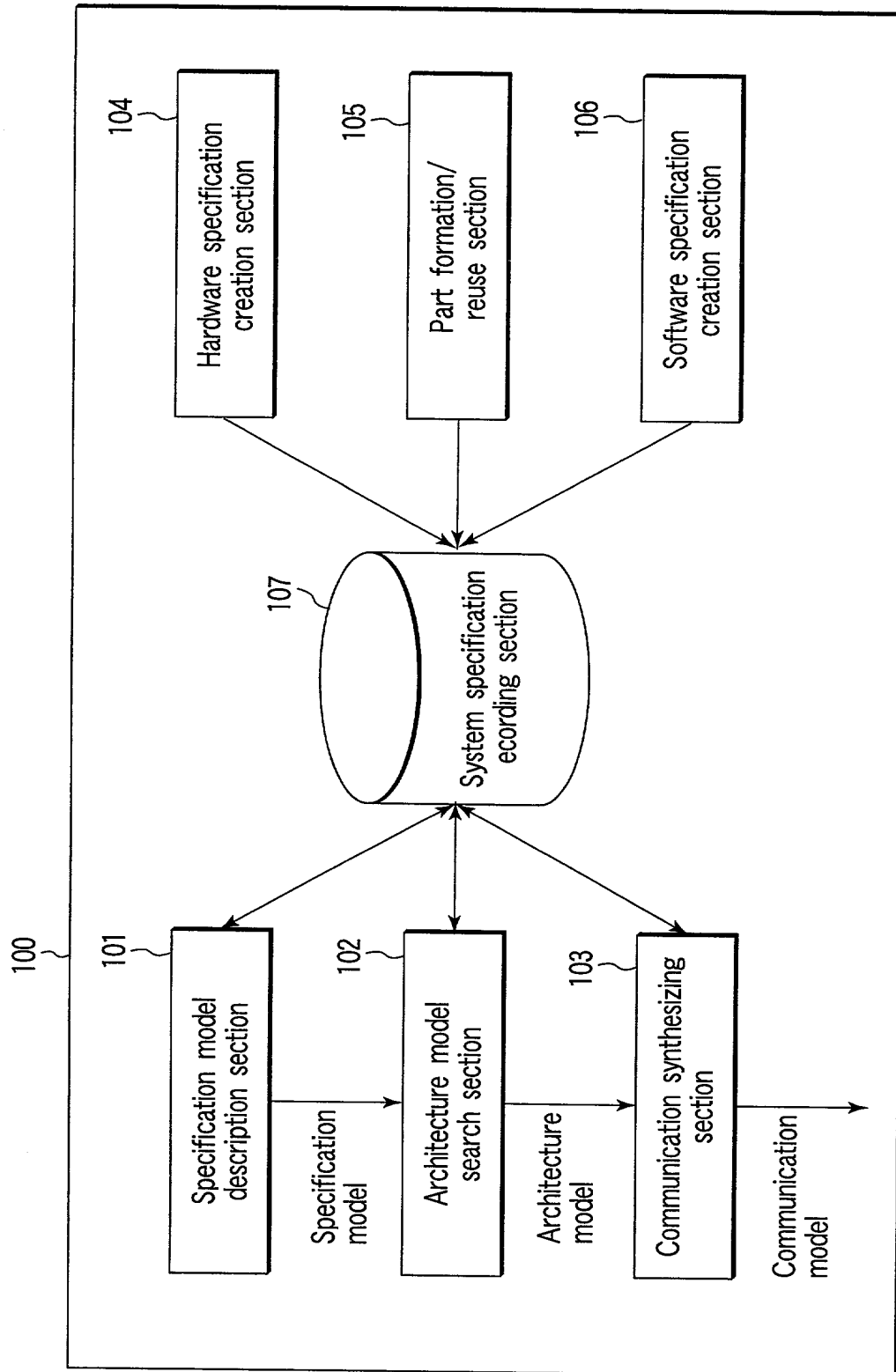


FIG.11